

## TWOPM205 Power Meter

### Picture:



### Introduction:

TWOPM205 mini handheld optical power meter is the most light weight and compact in size testing instrument. It Characteristics ease-of-use and economy advantages and can be used for absolute power measurement in optical fibers. TWOPM205 in combination with the TWOLS110 mini handheld light source become the most portable and advantageous testing pair.

### Characteristics:

The most compact in Size, ideal for field operation  
Power measurements in dBm and mw.  
Energy-saving design, 10 minutes Auto-off function

### Applications

Maintenance in Telecom and maintenance CATV  
Test Lab of optical fibers and other Fiber Optic Measurements

### Specifications

| Type                   | TWOPM205A                     | TWOPM205B | TWOPM205C | TWOPM205D |
|------------------------|-------------------------------|-----------|-----------|-----------|
| Wavelength             | 800 ~1700 nm                  |           |           |           |
| Detector               | InGaAs                        |           |           |           |
| Measurement Range      | -60~+3                        | -50~+10   | -40~+20   | -30~+30   |
| Uncertainty            | ±5% (-10 dBm,20±3℃)           |           |           |           |
| Calibrated Wavelength  | 850.980.1310.1550 nm          |           |           |           |
| Resolution             | 0.01 dBm                      |           |           |           |
| Connector              | FC or Universal 2.5mm adaptor |           |           |           |
| Power Supply           | Alkaline Battery(3 AA 1.5V)   |           |           |           |
| Battery Operating Time | 360 h                         |           |           |           |
| Operating Temperatrue  | -10~+60 ℃                     |           |           |           |
| Storage Temperatrue    | -25~+70 ℃                     |           |           |           |
| Relative Humidity      | 0~95% (non-condensing)        |           |           |           |
| Dimension              | 115mm(W)×60mm(D)×20mm(H)      |           |           |           |
| Weight                 | 105 g                         |           |           |           |

## TWOPM206 Power Meter

### Picture:



### Introduction:

TWOPM206 intelligent handheld power meter is a perfect testing instrument for both laboratory and field applications in optical fibers. It Characteristics friendly User Interface with menu operation, automatic frequency identification , large LCD display with backlight and dual-way powering system. The internal microprocessor and linear amplifier technology ensure the long-term accuracy. In addition, LT206 has a memory capacity of 240 records and can transfer the measurement data through a RS232 communication port to a PC for printing or editing. Moreover, it can also perform on-line data upload after programme control.

### Characteristics

Memory capacity of 240 data items; enables data transfer to a PC via RS232 communication port.

High accuracy and wide dynamic range

Automatic frequency identification

Power measurements in dBm or mw and insertion loss in dB

Low battery indication

Energy-saving design, 10 minutes Auto power off function

### Applications:

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications:

| Type                    | TWOPM206A                      | TWOPM206C |
|-------------------------|--------------------------------|-----------|
| Wavelength              | 800 ~1700 nm                   |           |
| Detector                | InGaAs                         |           |
| Measurement Range       | -70~+6                         | -50~+26   |
| Uncertainty             | ±5% (-10 dBm,20±3℃)            |           |
| Calibrated Wavelength   | 850.980.1300 1310.1490 1550 nm |           |
| Communication Interface |                                |           |
| Resolution              | 0.01 dBm                       |           |
| Connector               | FC or Universal 2.5mm adaptor  |           |

|                        |                             |
|------------------------|-----------------------------|
| Power Supply           | Alkaline Battery(3 AA 1.5V) |
| Battery Operating Time | 21 h                        |
| Operating Temperatrue  | -10~+60 °C                  |
| Storage Temperatrue    | -25~+70 °C                  |
| Relative Humidity      | 0~95% (non-condensing)      |
| Dimension              | 210mm(W)×115mm(D)×55mm(H)   |
| Weight                 | 520 g                       |

## TWOPM208 Power Meter

### Picture:



### Introduction:

LIGHTRAVEL TWOPM208 handheld optical power meter is a compact and an easy-to-use testing instrument for optical fiber networks, which can be used for absolute optical power measurements as well as for relative loss measurements in optical fibers. It Characteristics ingenious appearance, wide range of power measurement, high accuracy and user self-calibration function with high performance-to-price ratio.

### Characteristics:

User self calibration function Comfortable LCD display and optional backlight

LCD display supports night operation.

Power measurements in dBm or mw and insertion loss in dB.

Low battery consumption, more than 240 hours continual operation time for three 1.5V alkaline batteries.

Optional 10 minutes Auto-off function

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications:

| Type                   | TWOPM208A                      | TWOPM208B   |
|------------------------|--------------------------------|-------------|
| Wavelength             | 800 ~1700 nm                   |             |
| Detector               | InGaAs                         |             |
| Measurement Range      | -70~+3 dBm                     | -30~+20 dBm |
| Uncertainty            | ±5% (-10 dBm,20±3℃)            |             |
| Calibrated Wavelength  | 850、980、1300、1310、1490、1550 nm |             |
| Resolution             | 0.01 dBm                       |             |
| Connector              | FC or Universal 2.5mm adaptor  |             |
| Power Supply           | Alkaline Battery(3 AA 1.5V)    |             |
| Battery Operating Time | 240 h                          |             |
| Operating Temperatrue  | -10~+60 ℃                      |             |
| Storage Temperatrue    | -25~+70 ℃                      |             |

|                   |                           |
|-------------------|---------------------------|
| Relative Humidity | 0~95% (non-condensing)    |
| Dimension         | 175mm(W)×82mm(D)×33 mm(H) |
| Weight            | 310 g                     |

## TWOPM211 Power Meter

### Picture:



### Introduction:

LIGHTRAVEL TWOPM211 Series optical power meter is a handheld optical power meter, newly released in 2007, which can be used for absolute optical power measurements as well as for relative loss measurements in optical fibers. A photosensitive area photodiode is used to significantly improve the stability and the reliability. It Characteristics ingenious appearance, a wide range of power measurement, high accuracy, an user self-calibration function and a reference power level storage.

### Characteristics:

Reference power level storage (Ref Setting)

User self-calibration function

Comfortable LCD display and backlight LCD display supports night operation.

Power measurements in dBm or mw and insertion loss in dB

Optional 10 minutes Auto-off function

AA alkaline batteries can last more than 140 hours, AC adaptor also available

Low battery power indication

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of Optical Fibers

Other Fiber Optic Measurements

### Specifications:

| Type                   | TWOPM211A                      | TWOPM211C  |
|------------------------|--------------------------------|------------|
| Wavelength             | 800 ~ 1700 nm                  |            |
| Detector               | InGaAs                         |            |
| Measurement Range      | -70~+10dBm                     | -50~+30dBm |
| Uncertainty            | ±5% (-10 dBm, 20±3°C)          |            |
| Calibrated Wavelength  | 850、980、1300、1310、1490、1550 nm |            |
| Resolution             | 0.01 dBm                       |            |
| Connector              | FC or Universal 2.5mm adaptor  |            |
| Power Supply           | Alkaline Battery(3 AA 1.5V)    |            |
| Battery Operating Time | 240 h                          |            |

|                       |                           |
|-----------------------|---------------------------|
| Operating Temperature | -10~+60 °C                |
| Storage Temperature   | -25~+70 °C                |
| Relative Humidity     | 0~95% (non-condensing)    |
| Dimension             | 190mm(W)×100mm(D)×50mm(H) |
| Weight                | 370 g                     |

## TWOPM212 Power Meter

### Picture:



### Introduction:

LIGHTRAVEL develops this new PON power meter targeted at the FTTx application and maintenance. This power meter is able to simultaneously test and estimate the signals of the voice, data and video. It is an essential and ideal tool for the construction and maintenance of the PON projects.

### Characteristics

Providing simultaneous measurement at all three wavelengths on the fiber (1490nm, 1550nm, 1310nm)

Used in Burst mode measurement of 1310nm upstream

USB communication port enables data transfer to a PC

1000 measurement items can be saved in TWOPM212 PON power meter or computer for data review.

LT212 PON power meter offers up to 10 different threshold sets in total; Three status LEDs represents different optical signal conditions of Pass, Warn and Fail respectively.

User self-calibration can be performed and "Factory Default" mode can be retrieved in computer through the software.

PON SC standard connector, easy to test

Optional 10 minutes auto-off function and low battery indication.

### Specifications:

| Item                         | Specifications |
|------------------------------|----------------|
| 1310nm Upstream Measurement  |                |
| Pass Zone (nm)               | 1260~1360nm    |
| Isolation @ 1490/1550nm (dB) | >40            |
| Measurement Range (dBm)      | -40~+10        |
| 1490nm Upstream Measurement  |                |
| Pass Zone (nm)               | 1470~1505nm    |
| Isolation @ 1310/1550nm (dB) | >40            |
| Measurement Range (dBm)      | -40~+10        |
| 1550nm Upstream Measurement  |                |
| Pass Zone (nm)               | 1535~1570nm    |

|                                |                  |
|--------------------------------|------------------|
| Isolation @ 1490/1310nm (dB)   | >40              |
| Measurement Range (dBm)        | -40~+20          |
| Measurement Accuracy           |                  |
| Connatural Uncertainty (dB)    | +/- 0.5          |
| Linearity (dB)                 | +/- 0.1          |
| Passing Through Insertion Loss | <2               |
| General Information            |                  |
| Display                        | Graphic Display, |
| Measurement Unit               | dBm db.mw.uw     |
| Resolution                     | 128X64           |
| Fiber Type                     | 9/125um          |
| Input Power Range              | DC 6.5V—8.5V     |
| Rechargeable Battery           | 7.4V             |
| AC adaptor                     | 8.4V             |
| Operation Temperature (°C)     | -10~+60          |
| Storage Temperature (°C)       | -25~+70          |
| Dimensions (mm)                | 210X115X55       |
| Weights (g)                    | 520              |

## TWOPM-Mini Power Meter

### Picture:



### Introduction:

LT1000 Min Series Power Meter equips with wide angle detector, replaceable attenuator and various fiber adapters, which can be connected directly with the computer with USB or RS232 communication port. It is an intelligent but economical test device and very suitable for optical power measurements from Passive Components Producers, Research Lab and University Lab.

### Characteristics

Wide angle Si、Ge detectors can be alternative

The LT 1000 min series OPM can support the detector size up to 5mm for Ge detector and 10mm for Si detector.

The measurement wavelength range is from 400~1100nm for Si detector and 800~1600 for Ge detector, with dynamic range of 60dB.

Compensation of the detector temperature

LT1000min series OPM can calibrate the value of the testing result through the detector temperature compensation; this will lessen the reading value offset caused by the external temperature change

Various Optical Fiber Adaptors can be required

LT1000min series OPM provide the FC, SC, ST, LC and other kind of changeable optical fiber adaptors, can adapt for all kinds of the need of the optical fiber connection.

User-self Calibration Function

Any wavelength can be calibrated by user independently (up to 9 wavelengths calibration can be supported).

The device does not need to send back to the original factory for recalibration, it can be dealt with in the local Measurement Bureau for the annual calibration.

Attenuation Chips can be changeable

LT1000min series OPM support 10, 100 and 1000 absorbability attenuation chips, for the convenience of users' variable attenuation requirements.

## WIN32 API Support

LT1000 min series OPM provide various API ports based on WIN32, so that the user can develop its own software according to its actual requirements, which includes:

### 1) Data Reading

Read the current wavelength power value (also can customize the relative log, absolute log, and linearity), also can read the detector temperature

### 2) Calibration

Calibrate the current wavelength, zero calibration, and adjust the compensation temperature

### 3) Setting

Setting the wavelength, Setting the measurements mode (manual, Auto), Setting the ranger, Setting the filter speed, Setting Units, Setting the reference value

## Specifications:

| Model                                     | LT1000 mini Series OPM                                                                         |
|-------------------------------------------|------------------------------------------------------------------------------------------------|
| Wavelength (nm)                           | 400~1100(Si); 800~1600(Ge)                                                                     |
| Pre-determined calibrated wavelength (nm) | 850/980/1300/1310/1490/1550/1625 (Ge Detector);<br>660/780/820/850 (Si Detector)               |
| Self-calibration wavelength qty           | 9 Max                                                                                          |
| Uncertainty (Full rang)                   | 5%                                                                                             |
| Dynamic Rang (dB)                         | 70                                                                                             |
| Unit                                      | Linear: nw、uw、mw、w .Log: dB、dBm                                                                |
| Displaying speed (Data average)           | SLOW: 960ms (16 times on average)<br>MEDIUM: 480ms (8 times on average)<br>FAST: 60ms (uneven) |
| Resolution                                | 0.001                                                                                          |
| Communication Port                        | Standard RS232 Port or USB port                                                                |
| Cable length                              | 1.5m (Standard) or Customized                                                                  |
| Operation temperature (°C)                | +10~+40                                                                                        |
| Storage temperature(°C)                   | -20~+60                                                                                        |
| AC adaptor                                | 9V DC/RS232 or supply by USB cable                                                             |
| Warm-up time                              | 20Min.                                                                                         |
| Weight(kg)                                | <200g                                                                                          |
| Dimensions(mm)                            | Ø45×40                                                                                         |

## TWOLS108 Light Source

### Picture:



### Introduction:

TWOLS108 advanced stability handheld optical light sources designed specially aim at users with high requirements. With features of durable structure, large LCD display with backlight and friendly operation interface, the LT108 advanced stability handheld optical light source provides a lot of convenience for your field work. High stability of output power and quite stable output wavelength, it is an ideal instrument for optical network installation, trouble shooting, maintenance and other optical fiber related systems.

### Characteristics

Provides dual-wavelengths output and wavelengths can be optional according to customer's needs

CW, 270Hz, 1KHz, 2KHz modulation frequency output

High stability of the output power

Stable output wavelength

Backlight LCD display supports night operation

Large LCD, easy operation

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications:

| Type                   | TWOLS108 Series                             |          |
|------------------------|---------------------------------------------|----------|
| Wavelength (nm)        | 1310/1550                                   | 850/1310 |
| Emitter Type           | FP-LD                                       |          |
| Output Power (dBm)     | -7~+6                                       |          |
| Spectral Width         | ≤10 nm                                      |          |
| Output Stability       | ±0.05dB/15min; ±0.1dB/8hours                |          |
| Modulation Frequencies | CW, 270Hz, 1KHz, 2KHz                       |          |
| Optical Connector      | FC/PC                                       |          |
| Power Supply           | Rechargeable battery + Power supply adaptor |          |
| Battery Operating Time | 15 h                                        |          |

|                       |                            |
|-----------------------|----------------------------|
| Operating Temperature | -10~+60 °C                 |
| Storage Temperature   | -25~+70 °C                 |
| Dimension             | 210mm(W)×115mm(D)×55 mm(H) |
| Weight                | 515 g                      |

## TWOLS109 Light Source

### Picture:



### Introduction:

LIGHTRAVEL TWOLS109 optical light source can provide 1 to 4 output wavelengths to meet specific requirements, including the 650nm red source and the 1310/1550nm wavelengths for single mode fiber or the 850/1300nm wavelengths for multimode fiber, as well as other wavelengths according to customer needs. Together with the TWOPM208 optical power meter, it is a perfect solution for the fiber optic network characterization.

### Characteristics:

- Provides 1~4 output wavelengths
- modulation output at other wavelengths.
- High stability of the output power
- Stable output wavelength
- Backlight LCD display supports night operation
- Compact size and decent appearance
- Large LCD, easy operation

### Applications

- Maintenance in Telecom
- Maintenance CATV
- Test Lab of optical fibers
- Other Fiber Optic Measurements

### Specifications:

| Type                   | TWOLS109 Series              |           |          |                    |
|------------------------|------------------------------|-----------|----------|--------------------|
| Wavelength (nm)        | 650                          | 1310/1550 | 850/1310 | 850/1300/1310/1550 |
| Emitter Type           | FP-LD,LED or Customized      |           |          |                    |
| Output Power (dBm)     | -7 dBm for LD,-20dBm for LED |           |          |                    |
| Spectral Width         | ≤10 nm                       |           |          |                    |
| Output Stability       | ±0.05dB/15min; ±0.1dB/8hours |           |          |                    |
| Modulation Frequencies | CW,270Hz,1KHz,2KHz           |           |          |                    |
| Optical Connector      | FC/PC                        |           |          |                    |
| Power Supply           | Alkaline Battery(3 AA 1.5V)  |           |          |                    |

|                        |                           |
|------------------------|---------------------------|
| Battery Operating Time | 45 h                      |
| Operating Temperature  | -10~+60 °C                |
| Storage Temperature    | -25~+70 °C                |
| Dimension              | 175mm(W)×82mm(D)×33 mm(H) |
| Weight                 | 295 g                     |

## TWOLS110 Light Source

### Picture:



### Introduction:

TWOLS110 Mini optical light source is the most rugged small size instrument in the industry. It integrates super small size and strong function in one unit. With 3 pieces of 1.5V alkaline batteries, it can work continuously for more than 40 hours. The total weight is only 110g. Together with the LT205 Mini optical power meter, it provides an excellent solution for fiber optic network and for field work.

### Characteristics

High stability of the output power

Economic type, easy to use

Matched with the LT205 mini power meter,

it constitutes the smallest optical loss test kit, perfect for field testing

### Applications:

Maintenance in Telecom Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specification:

| Type                   | TWOLS110                     |
|------------------------|------------------------------|
| Wavelength (nm)        | 1310 or 1550                 |
| Emitter Type           | FP-LD                        |
| Output Power (dBm)     | -7~+6                        |
| Spectral Width         | ≤10 nm                       |
| Output Stability       | ±0.05dB/15min; ±0.1dB/8hours |
| Optical Connector      | FC/PC                        |
| Power Supply           | Alkaline Battery(3 AA 1.5V)  |
| Battery Operating Time | 40h                          |
| Operating Temperature  | -10~+60 °C                   |
| Storage Temperature    | -25~+70 °C                   |
| Dimension              | 115mm(W)×60mm(D)×20 mm(H)    |

Weight

110 g

## TWOLS111 Light Source

### Picture:



### Introduction:

LIGHTRAVEL TWOLS111 optical light source is a handheld optical light source, newly released in 2007. It can provide 1 to 6 wavelengths output to satisfy specific requirements including the 650nm visible light source and the 1310/1550nm wavelengths for single mode fiber or the 850/1300nm wavelengths for multimode fiber, as well as other wavelengths according to customer's needs. Together with the TWOPM211 optical power meter, it is a perfect solution for fiber optic network applications.

### Chatacteristics:

- Provides 1~6 wavelengths output
- High stability of the output power
- Stable output wavelength
- Backlight LCD display supports night operation
- Low battery power indication

### Applications

- Maintenance in Telecom
- Maintenance CATV
- Test Lab of optical fibers
- Other Fiber Optic Measurements

### Specifications:

| Type                   | TWOLS111 Series                                        |
|------------------------|--------------------------------------------------------|
| Wavelength (nm)        | Provides 1 to 6wavelengths                             |
| Emitter Type           | FP-LD,LED                                              |
| Output Power (dBm)     | 0 for 650nm/-7for 1310,1550,-20dBm for LED             |
| Spectral Width         | ≤10 nm                                                 |
| Output Stability       | ±0.05dB/15min; ±0.1dB/8hours                           |
| Modulation Frequencies | CW,270Hz for 650nm, CW,270Hz 1KHz,2KHz for 1310,1550nm |

|                        |                             |
|------------------------|-----------------------------|
| Optical Connector      | FC/PC (Others are optional) |
| Power Supply           | Alkaline Battery(3 AA 1.5V) |
| Battery Operating Time | 45 h                        |
| Operating Temperature  | -10~+60 ℃                   |
| Storage Temperature    | -25~+70 ℃                   |
| Dimension              | 190mm(W)×100mm(D)×50 mm(H)  |
| Weight                 | 370 g                       |

## LTVA303 Fiber Optic Variable Attenuators

### Picture:



### Introduction:

LT303 handheld optical variable attenuator is used for continuously variable optical signal attenuation. As the attenuator is used in the laser system for the on-line testing, there, therefore LT303 can be used in the digital system of communication devices (such as PHD, SDH) and also in the system of adopting analog modulation (CATV)

### Characteristics

stepwise attenuating by circumgyrated dial: attenuating step 0.05dB

Provide with the function of displaying dB and dBm attenuating value

Alternative function of 10 minutes Auto-off without operation

After off the instruments, the system will have the memorizing of the attenuating value and the attenuating step, in order to restore the system back to the previous shut down state when open the instruments next time

### Application

Telecom Maintenance

CATV Maintenance

Comprehensive cable construction system

Optical instruments research and development

Optical communication education and lab testing

Other optical project

### Specification:

|      |         |
|------|---------|
| Type | LTVA303 |
|------|---------|

|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Attenuating wavelength Range | 1260~1650nm                                             |
| Fiber Model                  | 9/125um SM                                              |
| Optical Connector            | FC/PC                                                   |
| Calibrated wavelengths       | 1310/1490/1550/1625                                     |
| Measurement Range            | 2.5~60dB                                                |
| Resolution                   | 0.05dB                                                  |
| Minimize Insertion Loss      | 2.5dB                                                   |
| Linearity                    | Φ0.5dB                                                  |
| Repeating                    | Φ0.2dB                                                  |
| Attenuating Accuracy         | Φ0.8dB                                                  |
| Back Reflection              | ≈35Db typical value40dB                                 |
| Max input                    | ≤20dBm                                                  |
| Displaying type              | lattice 128*64 black and white, white back ground light |
| Rechargeable batteries       | 7.4V                                                    |
| Power supply adaptor         | 7~8.5V                                                  |
| Operation temperature        | 0~40                                                    |
| Storage temperature          | -10~60                                                  |
| humidity                     | 0~85% non- condensation                                 |
| Weight                       | 450g                                                    |

## LTID306A Fiber Optic Identifiers

### Picture:



### Introduction:

LTID306A Optical Fiber Identifier is an essential installation and maintenance instrument. By inserting the fiber into its adapter head, it can identify SM optical fibers without any damage by detecting the optical signals being transmitted through them so as to avoid the opening of the fiber at the splice point for identification and thus avoids the interruption of the service. In the presence of traffic, the intermittently audible tone is activated. The LT306A optical fiber identifier also allows relative core power display and identification of the 270Hz, 1kHz and 2kHz frequencies. When they are used to detect the frequency, the continuously audible tone is activated. There are four types of adapter heads available: 0.25, 0.9, 2.0 and 3.0. The LT306A optical fiber identifier is powered by a 9V alkaline battery.

### Characteristics:

Efficiently identifies the traffic direction and frequency tone (270Hz, 1KHz, 2KHz) without any damage of the fibers.

Displays the core power of the fibers (-50~+0dBm)

Low bending loss and highly efficient output

Easy-to-replace adaptors

Mechanical damp design of adapter heads to ensure the fiber without damage.  
operation design, easy-to-sue

### Applications:

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications:

| Type                       | LTID306A   |
|----------------------------|------------|
| Identified Wavelength (nm) | 800—1700nm |

|                        |                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------|
| Identified Signal Type | CW,270Hz+/-5%.1Hz+/-5%.2Hz+/-5%.                                                                 |
| Detector Type          | Φ1mm InGaAs 2Pcs                                                                                 |
| Adapter Type           | Φ0.25 (for Bare fiber)<br>Φ0.9 (for Φ0.9 fiber)<br>Φ2.0 (for Φ2.0 fiber)<br>Φ3.0(for Φ3.0 fiber) |
| Signal Direction       | Left & Right LED                                                                                 |
| Optical Power Reading  | -50~+0dBm                                                                                        |
| Signal Frequency       | 270Hz,1kHz.2kHz                                                                                  |
| Power Supply           | One 9V alkaline Batteries                                                                        |
| Operating Temperature  | -10~+60℃                                                                                         |
| Storage Temperature    | -25~+70 °C                                                                                       |
| Dimension              | 195mm(W)×30mm(D)×27mm(H)                                                                         |
| Weight                 | 235g                                                                                             |

## LTTTS103 Fiber Optic Talk Sets

### Picture:



### Introduction:

JW4103 Optical Talk Set is an intelligent and efficient instrument that combines in one set the functions of both a digital optical phone and a stabilized light source. It is widely used in operations of installation, optical testing, maintenance and fiber attenuation value testing in data network, CATV and Telecommunication network. The JW4103 Talk Set can carry out full-duplex communication with high quality connection and not be affected by distance.

### Characteristics

Full-duplex digital communication with high quality conversation connection and low background noise

Together with Optical Clip-on Coupler, enables on line communications available

Combining functions of both a digital optical phone call and a stabilized light source.

Large LCD display with backlight

Low battery power indication

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications:

| Type                   | LTTTS103                                              |
|------------------------|-------------------------------------------------------|
| Wavelength (nm)        | 1310/1550                                             |
| Emitter Type           | FP-LD                                                 |
| Transmission Distance  | ≥80Km                                                 |
| Output Stability       | +/-0.1db/+/-0.25db (1/8hours) CW                      |
| Pulse Frequencies      | 2~3Hz                                                 |
| Output Power (dBm)     | -5~+7dbm(9/125um),CW or 2kHz,1kHz,270Hz<br>Modulation |
| Power Supply           | Rechargeable battery + Power supply adaptor           |
| Battery Operating Time | 5 h                                                   |

|                       |                            |
|-----------------------|----------------------------|
| Operating Temperature | -10~+60℃                   |
| Storage Temperature   | -25~+70 ℃                  |
| Dimension             | 215mm(W)×115mm(D)×55 mm(H) |
| Weight                | 520g                       |

## LTVFL105 Visual Fault Locators

### Picture:



### Introduction:

LTVFL105 Visual Fault Locator is used for the measurement in single-mode or multi-mode fibers. It Characteristics a rugged design, an universal connector and an accurate measurement. The LT105 visual fault locator easily identifies the cutting, micro-bending of the optic fiber, passes through the jacket fiber and performs an end-to-end fiber identification. Its measurement range is up to 5km. It is an ideal tool for the examination of all kinds of patch cords and ribbon or bunched pigtails in the installation and maintenance of fiber optic networks.

### Characteristics:

- Detects breaks, micro-bends even through jacketed fibers
- End-to-end visual fiber identification
- Locates faults up to 5km along the fiber.
- Mechanical fusion splice optimization
- Compact size and light weight, suitable for field testing

### Applications:

- Maintenance in Telecom
- Maintenance CATV
- Test Lab of optical fibers
- Other Fiber Optic Measurements

### Specifications:

| Type               | LTVFL105                     |
|--------------------|------------------------------|
| Wavelength (nm)    | 650+/-10nm                   |
| Emitter Type       | FP-LD                        |
| Output Power (dBm) | 1mw                          |
| Spectral Width     | ≤5 nm                        |
| Operation Model    | CW and 2Hz for options       |
| Pulse Frequencies  | 2~3Hz                        |
| Optical Connector  | FC 2.5mm universal connector |

|                        |                           |
|------------------------|---------------------------|
| Power Supply           | 2 AA alkaline Batteries   |
| Battery Operating Time | 30 h                      |
| Operating Temperature  | -10~+60℃                  |
| Storage Temperature    | -25~+70 ℃                 |
| Dimension              | 100mm(W)×50mm(D)×25 mm(H) |
| Weight                 | 50g                       |

## LTVFL105P Visual Fault Locators

### Picture:



### Introduction:

The LTVFL105 is specially designed for field personnel who need an efficient and economical tool for fiber tracing, fiber routing and continuity checking in an optical network during and after installation. It includes finding the breakpoint, poor connections, bending or cracking in fiber optic cables. Finding the faults of OTDR

### Characteristics

- 2.5mm universal connector
- Operates either in CW or Pulsed
- Constant output power
- Lower Battery warning
- Long battery life (up to 60 hours)
- Crash-proof and dust-proof design for laser head
- Laser case ground design prevents ESD damage
- Burning testing to ensure the reliability.
- Portable and rugged, easy to use
- Guarantee to CE standards include EMC, EMI, ROHS

### Specifications:

|                        |                                                        |
|------------------------|--------------------------------------------------------|
| Type                   | LTVFL105P                                              |
| Wavelength (nm)        | 850+/-10nm                                             |
| Emitter Type           | FP-LD                                                  |
| Output Power (dBm)     | 1mw,3mw,10mw as requested                              |
| Spectral Width         | ≤10 nm                                                 |
| Operation Model        | Both CW and Pulse available                            |
| Pulse Frequencies      | 2~3Hz                                                  |
| Optical Connector      | 2.5mm universal connector and 1.25mm via FC-LC adaptor |
| Power Supply           | 2 AA alkaline Batteries                                |
| Battery Operating Time | 45 h                                                   |
| Operating Temperature  | -10~+45°C                                              |

|                     |                           |
|---------------------|---------------------------|
| Storage Temperature | -40~+70 °C                |
| Dimension           | 180mm(W)×15mm(D)×15 mm(H) |
| Weight              | 120g                      |

## LTOTDR20 OTDR Series

### Picture:



### Introduction:

LTOTDR 20 palmOTDR series handheld OTDR supports averaging and real-time tests featuring compact design, excellent stability, user-friendliness and cost-effectiveness. The hotkeys enable convenient events review and analysis. A variety of models are available for singlemode/multimode fibers and LAN/WAN/FTTx applications. With TraceManager software, you can save and transfer test data from OTDR to PC for further analysis, reporting and printing.

### Characteristics:

Overall fiber application: SM/MM selectable

Dynamic range selectable

Quick startup ,hotkey feature

Trace manager software

Visible light source configuration

Enhanced power performance

Handy and smart safe and solid

### Applications:

Fiber optic testing systems

LAN,CATV,WAN network testing

Fiber optic network testing

### Specifications:

| Model               | palmOTDR                      |        |        |            |
|---------------------|-------------------------------|--------|--------|------------|
|                     | S20A/N                        | S20B/N | S20C/N | M20A/N     |
| Dynamic Range (dB)  | 24/24                         | 32/32  | 38/37  | 18/22      |
| Fiber Type          | Single Mode                   |        |        | Multi Mode |
| Wavelength (±20nm)  | 1310/1550                     |        |        | 850/1300   |
| Display Type        | TFT                           |        |        |            |
| Emitter Type        | LD                            |        |        |            |
| Connector Interface | FC/PC(Interchangeable SC, ST) |        |        |            |

|                                                                          |                                                             |                                                                             |
|--------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------|
| Selectable Range (Km)                                                    | 0.3,1.3,2.5,5,10,20,40,80,120,160,240                       | 0.1,0.3,0.5,1.3,2.5,5,10,20,40,80@1300nm<br>0.1,0.3,0.5,1.3,2.5,5,10@850nm; |
| Pulse Width                                                              | 5ns,10ns,12ns,30ns,100ns,275ns,300ns,1μs,2.5μs,10μs,20μs    | 12ns,30ns,100ns,275ns,1μs@850nm;<br>12ns,30ns,100ns,275ns,1μs,2.5μs@1300nm  |
| Average Time                                                             | 15s,30s,1min,2min,3min                                      |                                                                             |
| Attenuation DeadZone                                                     | 25m                                                         | 20m                                                                         |
| Event DeadZone                                                           | 10m                                                         | 7m                                                                          |
| Distance Measure Accuracy                                                | ±(1 m + 5×10 <sup>-5</sup> ×distance + sampling space)      |                                                                             |
| Attenuation Detect Accuracy                                              | ±0.05 dB/ dB                                                |                                                                             |
| Reflection Detect Accuracy                                               | ±4 dB                                                       |                                                                             |
| Data Storage                                                             | 300 records                                                 |                                                                             |
| Data Transmission Interface                                              | RS-232/USB                                                  |                                                                             |
| Visible Light Source (Only available with palmOTDR-S20 Type B/N and C/N) |                                                             |                                                                             |
| Output Power(dBm)                                                        | ≥-3                                                         |                                                                             |
| Max. Meas. Range(km)                                                     | 5                                                           |                                                                             |
| General Specifications                                                   |                                                             |                                                                             |
| Power Supply                                                             | NiMH battery / AC adapter                                   |                                                                             |
| Battery Life ( )                                                         | Continuous operation ≥ 8 hrs or Standby ≥ 20 hrs one charge |                                                                             |
| Operating Temp.                                                          | 0 ~ 50℃                                                     |                                                                             |
| Storage Temp.                                                            | -20~ 70℃                                                    |                                                                             |
| Relative Humidity                                                        | 0~95%non-condensing                                         |                                                                             |
| Weight                                                                   | 1kg (2.2 lbs)                                               |                                                                             |
| Dimensions (H×W×T)                                                       | 220×110×70mm (8.7×4.3×2.7 inch)                             |                                                                             |

Note: Instrument, FC/PC connector, NiMH battery, TraceManager software CD, Data cable(RS232/USB), AC adapter, Soft Carrying Case, Warranty Card, CE certificate, Certificate of Calibration, User manual.

## LT-OTDR-200 Series

### Pictrue:



Whole Set Picture



Interface

### Introduction:

LT-OTDR-200 Series: Optical Time Domain Reflector) is a handset with high performance. It has the ability to show the length, attenuation coefficient, connection point, fault point and loss distribution curves of the fiber as well as loss between two points, splice loss, and return loss. It has a small size, is easy to use, and is designed to be durable and for outdoors operations as well.

It is now widely used to analyze fiber loss characteristics in fiber manufacture, installation and maintenance, and locate the fiber's fault point. Moreover, this meter is compatible with CATV, ISP and Telecommunications Fiber Networks

### Charateristics:

- Portable design makes you convenient for outdoors work
- Simple operation menu and friendly user interface
- Support two markers combined
- Support zooming in and out for showing curve details better
- Knob design for easy operation
- Automatically locate fault points and create a list
- Large memory for saving test data
- Rapid response time, the meter can finish 50km fiber measurement in 30s with high S/N
- Large battery capacity, working time is over 12 hours
- Intelligent design

### Specifications:

|       |                    |
|-------|--------------------|
| Model | LT-OTDR-200 Series |
|-------|--------------------|

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| Pulse Widths                     | 10ns~15us                                                      |
| Wavelengths                      | 1310nm±20nm, 1550nm±20nm                                       |
| Accuracy of Distance Measurement | ±1m+reading*0.07%(not considered in error of refractive index) |
| Dynamic Range                    | max 28dB                                                       |
| Measurement Range                | 70km                                                           |
| Event Dead Zone                  | <5m                                                            |
| ATT Dead Zone                    | <25m                                                           |
| Loss Readout Resolution          | 0.01dB                                                         |
| testing time                     | <30s                                                           |
| Display                          | 320×240 5" LCD                                                 |
| Optical Connector Style          | FC/PC                                                          |
| Power Supply                     | AC/DC adapter(AC:90V~265V,                                     |
|                                  | 50Hz/60Hz), Internal Li-battery,                               |
|                                  | operating time more than 12 hours,                             |
|                                  | and support 150 curves saved at most                           |
| Dimension                        | 265mm×158mm×80mm                                               |
| Weight                           | 1.8kg                                                          |
| Option                           | Toolbox Analysis Software                                      |

## LT-320 Handheld Variable Optical Attenuator

### Picture:



### Introduction:

LT-320 Handheld Variable Optical Attenuator is used for continuously variable attenuation of light signals for communications equipment, including digital systems of communication (PDH, SDH) applications, and analog modulation (CATV) systems, but also an essential tool for building and maintenance of optical fiber communication engineering systems

### Feature

High precision of attenuation, good repeatability  
 Small size, light weight, high reliability  
 Battery-powered, convenient for field operations  
 Backlight provided

### Specification:

| Type                  | LT-320-50                                 | LT-320-60                             |
|-----------------------|-------------------------------------------|---------------------------------------|
| Operating wavelength  | 1310/1550 (nm)                            |                                       |
| Attenuating Range     | 0-50dB                                    | 0-60dB                                |
| Accuracy              | 0dB~20dB ( $\leq \pm 0.1\text{dB}$ )      | 0dB~20dB ( $\leq \pm 0.1\text{dB}$ )  |
|                       | 20dB~50dB ( $\leq \pm 0.2\text{dB}$ )     | 20dB~60dB ( $\leq \pm 0.2\text{dB}$ ) |
| Resolution            | 0.5                                       |                                       |
| Insertion Loss        | <2.0dB                                    |                                       |
| Repeating             | 0.05dB                                    |                                       |
| Optical Connector     | FC/PC                                     |                                       |
| Operating Temperature | -5 ~+60 (°C)                              |                                       |
| Storage Temperature)  | -20~+70 (°C)                              |                                       |
| Power Supply          | 3pcs AA 1.5V battery (last for 240 hours) |                                       |

|           |                |
|-----------|----------------|
| Dimension | 148×74×28 (mm) |
| Weight    | 225 (g)        |

## Bench-top Optical Instruments

### 1. LT-B420i Bench-top Optical Laser Source



#### Introduction

LT-B420i Bench-top Optical Laser Source is a semiconductor laser source based on intelligent micro-processing control, relying on high accuracy automatic power control (APC) and automatic temperature control (ATC) techniques. LT-B420i has a high stable output and various wavelengths to meet customers' requirement. It supports various lasers such as DFB, FP, PUMP, SLED and can be applied in components testing, and power meter calibration, etc.

#### Features

Large Color LCD display

High stability and reliability

Multi output and dual wavelength combining function

#### Specification

| Module                      | LT-B420i                                     |
|-----------------------------|----------------------------------------------|
| Emitter Type                | FP, DFB, LED, SLED                           |
| Operating Wavelength (nm)   | 1310/1550 or can be specified                |
| Output Power (dBm)          | +3dBm or can be specified                    |
| Output Stability (dB/15min) | ±0.005                                       |
| Output Stability (dB/8h)    | ±0.05                                        |
| Optical Output              | CW, internal modulation, external modulation |
| Optical Connector           | FC/APC Connector                             |
| Operating Temperature (°C)  | -10~+60                                      |
| Storage Temperature (°C)    | -25~+70                                      |
| Power Supply                | AC 220V ±15% 50Hz±10Hz                       |
| Dimension (mm)              | 300×260×120                                  |
| Weight (kg)                 | 2.3                                          |

## 2. LT-B620i Bench-top Optical Power Meter



### Introduction

TWOPMB620i Optical Power Meter is one of LIGHTRAVEL high precision and wide measurement range test instrument which specially target at passive components factories and R&D institutions, with features of easy operation, accurate testing, durable use, intelligent micro-processing control and the automatic switching of the measurement range and it eliminate the errors caused by the non-linearity response of PIN sleeve to the power meter under the condition of same wavelength but different power. It significantly improves the accuracy and stability of the unit.

### Features

Large Color LCD Display,

High sensitivity and display resolution

Large signal to noise ratio and dynamic range with the new Data Collection Techniques

User self-setting the calibrated wavelength

The automatic power monitoring via USB communication port

### Specification

| Type                       | TWOPMB620i                                    |
|----------------------------|-----------------------------------------------|
| Calibrated Wavelength (nm) | 850, 980, 1310, 1490, 1550 (can be specified) |
| Wavelength Range (nm)      | 800~1700                                      |
| Photo Detector             | InGaAs $\phi$ 2.0mm                           |
| Measurement Range (dBm)    | -70~+6                                        |
| Intrinsic Uncertainty      | $\pm 3\%$                                     |
| Display Resolution         | 0.001                                         |
| Optical Connector          | Can be exchanged with several types connector |
| Operating Temperature (°C) | -10~+60                                       |
| Storage Temperature (°C)   | -25~+70                                       |
| Operating Power            | AC 220V $\pm 15\%$ 50Hz $\pm 10$ Hz           |
| Dimension (mm)             | 300×260×120                                   |
| Weight (kg)                | 2.3                                           |

### 3. LT-B630i Dual Channel Bench-top Optical Power Meter



#### Introduction

TWOPMB630i Dual Channel Bench-top Optical Power Meter is LIGHTRAVEL high precision and wide measurement range test equipment. Intelligent microprocessor control, with automatic range switching, optical detector PIN carried out sub-paragraph 8 of the linear processing within the framework of the entire range, eliminating the error of PIN caused by the nonlinear response different power at the same wavelength, which greatly improved the accuracy and reliability of detection equipment.

#### Features

- High-sensitivity and display resolution
- Large dynamic range, optional range
- Analog signal output, easy to second develop
- The use of advanced data capture technology,

#### Specification

| Type                  | TWOPMB630i                                    |
|-----------------------|-----------------------------------------------|
| Calibrated Wavelength | 850~1650nm can be specified                   |
| Wavelength Range      | 800~1700 (nm)                                 |
| Detector type         | InGaAs $\phi$ 2.0mm                           |
| Measurement Rang      | -70~+6 (dBm)                                  |
| Uncertainty           | $\pm 3\%$                                     |
| Display Resolution    | logarithmic display: 0.001                    |
| Optical Connector     | Can be exchanged with several types connector |
| Operating Temperature | -10~+60 (°C)                                  |
| Storage Temperature   | -25~+70 (°C)                                  |
| Operating Power       | AC 220V $\pm 15\%$ 50Hz $\pm 10$ Hz           |
| Dimension             | 300×260×120 (mm)                              |
| Weight                | 2.3 (kg)                                      |

## 4. LT-B320i Bench-top Optical Variable Attenuator



### Introduction

LT-B320i Bench-top Variable Optical Attenuator is Light Travel's latest product, design for optical communication equipment development and engineering applications. It is a continuous variable optical attenuator commonly used for actual needs of operation. It adopts an intelligent digital display continuously variable optical attenuator and computer chips, combined with software as a control unit, high reliability, performance and measurement precision, wide usage, convenient to use. It is an essential tool for measurement optoelectronic devices, optical fiber cable, and optical fiber communications equipment.

### Features

Built-in optical power meter and variable attenuator module

High precision of attenuation, good repeatability

Intelligent type, continuously variable attenuation

### Specifications

| Type                       | LT-B320i                                                                      |
|----------------------------|-------------------------------------------------------------------------------|
| Operating Wavelength       | 1310/1550 (nm)                                                                |
| Attenuating Range          | 0-60dB (exclusive insertion loss)                                             |
| Accuracy                   | 0dB~20dB ( $\leq \pm 0.1\text{dB}$ )    20dB~60dB ( $\leq \pm 0.2\text{dB}$ ) |
| Resolution                 | 0.01                                                                          |
| Insertion Loss             | $< 2.0\text{dB}$                                                              |
| Repeating                  | 0.05dB                                                                        |
| Input and Output Connector | FC、SC、ST (PC)                                                                 |
| Operating Temperature      | -10 ~+60 (°C)                                                                 |
| Storage Temperature        | -20~+70 (°C)                                                                  |
| Power Supply               | AC 220V $\pm 15\%$ 50Hz $\pm 10\text{Hz}$                                     |
| Dimension                  | 300×260×120 (mm)                                                              |
| Weight                     | 2.3 (kg)                                                                      |

## LTOTDR-360i Mini OTDR



### Introduction

LTOTDR-360i Mini OTDR is Light Travel's newest instrument. The product is mainly used for measurement of the physical characteristics of optical fiber under test, such as the length, the transmission loss and the splice loss etc. It can also locate the faults or breaks of optical fiber. It's widely applied in the manufacture, construction and maintenance in optical fiber communication system.

### Feature

Handheld, light weight, convenience for carrying

Easy operation, steady performance

Large-capacity battery-powered, easy for field operation

### Specification

| Type                          | LTOTDR-360i                                                                                                                             |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Applicable Fiber              | Single Mode                                                                                                                             |
| Dynamic Range                 | 26dB                                                                                                                                    |
| Distance Measurement Accuracy | $\pm(1\text{m} + \text{sample space} + 0.003\% \times \text{measurement distance})$ (exclusive error of the placement refractive index) |
| Event Dead Zone               | 1.6m                                                                                                                                    |
| Distance Range                | 4、8、16、32、64、128、256km                                                                                                                  |
| Pulse Width                   | 10、30、80、160、320、640、1280、5120、10240ns                                                                                                  |
| Input/Output interface        | FC、SC、ST (PC)                                                                                                                           |
| Operating Temperature         | -10 ~+60 (°C)                                                                                                                           |
| Storage Temperature           | -20~+70 (°C)                                                                                                                            |
| Power supply                  | BuiLT-in Lithium battery: 7.4V, 4400mAh + Power adapter                                                                                 |
| Dimension                     | 180×80×48 (mm)                                                                                                                          |
| Weight                        | 1 (kg)                                                                                                                                  |

## LT-B430i PLC coupled-specific light source



### Introduction

LT-B430i Bench-top light source is designed specifically for PLC-coupled processes, with two output ports; it can be compatible with  $1 \times N$  and  $2 \times N$  chip. When test  $2 \times N$  chip, you do not need to plug input optical connector back and forth. Every output port of LT-B430i Bench-top light source can be switch back and forth between 650nm and 1310nm laser, to avoid plugging

### Features

Support  $1 \times N$  and  $2 \times N$  chip

Switch over 650nm and 1310nm with one key

Good output stability of 1310nm laser

Respectively adjustable optical power of 650nm and 1310nm laser

### Specification

| Type                          | LT-B430i                                     |
|-------------------------------|----------------------------------------------|
| 650nm laser Output Power      | 100uw                                        |
| 1310nm laser Output Power     | $\geq 2\text{mW}$                            |
| 1310nm laser Output Stability | 0.005dB/15min                                |
|                               | 0.05dB/8h                                    |
| 1310nm Channel Consistency    | $< 0.2\text{dB}$                             |
| Optical Connector             | FC/APC                                       |
| Operating Temperature         | $15^{\circ}\text{C} \sim 35^{\circ}\text{C}$ |
| Storage Temperature           | $-10 \sim +60^{\circ}\text{C}$               |
| Power Supply                  | AC 220V $\pm 15\%$ 50Hz $\pm 10\text{Hz}$    |
| Dimension                     | 300 $\times$ 260 $\times$ 120 (mm)           |
| Weight                        | 2.3 (kg)                                     |

# LT-310 Optical Fiber Identifier



## Introduction

Optical Fiber Identifier is an easy-to-use optical test instrument that identifies optical fibers without any damage by detecting the optical signals being transmitted through the fibers so as to avoid the opening of the fiber at the splice point for identification and thus avoids the interruption of the service. The optical fiber identifier can also identify the 270Hz, 1 kHz and 2 kHz frequencies.

## Features

- Display the output power of the fibers
- Easy-to-replace adaptors to match various optical cables
- Detecting three signal frequencies 2kHz, 1kHz, 270Hz
- Displaying signal intensity
- Easy and convenient operation with a single keystroke

## Specification

| type                        | LT-310                                         |
|-----------------------------|------------------------------------------------|
| Identified Wavelength Range | 800—1700nm                                     |
| Identified Signal Type      | CW, 270HZ±5%, 1KHZ±5%, 2KHZ±5%                 |
| Emitter Type                | Ø1mm InGaAs 2pcs                               |
| Adapter Type(mm)            | Ø 0.25for bare fiber Ø 0.9/2.0/3.0 for pigtail |
| Signal Direction            | Left and right LED                             |
| Optical Power Reading       | Digital display                                |
| Signal Frequency            | 270Hz, 1KHz, 2KHz LED                          |
| Operation Temperature(°C)   | —10~+60                                        |
| Storage Temperature(°C)     | -25~+70                                        |
| Power Supply                | 9V                                             |
| Dimension(mm)               | 195x30x27                                      |
| Weight (g)                  | 235                                            |

# TWOPM-640i Intelligent Optical Power Meter



## Introduction

TWOPM-640i Intelligent Optical Power Meter is the newly developed multi-functional power meter. It equips with wide angle detector and it significantly improves the stability and the reliability. It features user-friendly interface with menu operation, easy to operate and 3.5inches colored LCD display, smooth appearance, compact size and decent appearance auto-off function, high accuracy and wide dynamic range, new frequency recognition function and FC/SC/LC universal adapter.

## Features

Self-calibrating functions

Automatic frequency identification

Memory capacity data items; enables data transfer to a PC

Power measurements in dBm or mw

Low battery reminder

Unique FC/SC/LC universal adapter

## Specification

| Type                       | TWOPM-640Ai                | TWOPM-640Ci |
|----------------------------|----------------------------|-------------|
| Wavelength Type (nm)       | 800~1700                   |             |
| Detector Type              | InGaAs $\phi$ 1.0mm        |             |
| Measurement Range (dBm)    | -70~+10                    | -50~+30     |
|                            | $\pm 5\%$                  |             |
| Power relative Measurement | 0.01dBm                    |             |
| Power Supply               | 4 AA battery, AC adapter9V |             |
| Operation Temperature (°C) | -10~+60                    |             |
| Storage Temperature (°C)   | -25~+70                    |             |
| Dimension (mm)             | 180*80*48                  |             |
| Weight (g)                 | 360                        |             |

## TWOPM-660i PON Optical Power Meter



### Introduction

PON Optical Power Meter is Light Travel's newly developed power meter targeted at the FTTX application. It can simultaneously test and estimate the signal of the voice, data and video. It is an ideal test instrument for the PON projects and for the construction and maintenance of FTTX.

### Features

Simultaneously test and display of signal of the voice, data and video on BPON/EPON/GPON framework

Simultaneously measurement at three wavelengths on the fiber

Used in burst mode measurement of 1310nm upstream

Data storage with USB communication port

Offering up to 10 different thresholds sets in total

### Specification

| Type                       | TWOPM-660i        |                |                |
|----------------------------|-------------------|----------------|----------------|
| Calibrated Wavelength      | 1310upstream      | 1490downstream | 1550downstream |
| Bandwidth (nm)             | 1260~1360         | 1470~1505      | 1535~1570      |
| Measurement Range (dBm)    | -40~+10           | -40~+10        | -40~+20        |
| Isolation1490nm (dB)       | >40               |                | >40            |
| Isolation1550nm (dB)       | >40               |                | >40            |
| Uncertainty (dB)           | ±0.5              |                |                |
| PDL (dB)                   | <±0.25            |                |                |
| Insertion Loss (dB)        | <1.5              |                |                |
| Relative Measurement       | 0.01dB            |                |                |
| Fiber Type                 | Single mode fiber |                |                |
| Operating Temperature (°C) | -10~+60           |                |                |
| Dimension (mm)             | 180*80*48         |                |                |

# TWOPM-630 Rechargeable Power Meter



## Introduction

TWOPM-630 Handheld Optical Power Meter is one of Light Travel 's newly developed multi-functional power meter designed for the installation, construction and maintenance of optical fiber network. It features compact size, smooth appearance, user friendly design, optional backlight, auto-off function, wide measurement range, accurate test, and universal connector.

## Features

Large LCD display, multi functions

Super Battery Working Hours

Self-calibrating functions

2.5mm universal Adapter

Quick react

Auto switch off function (optional)

## Specifications

| Type                       | TWOPM-630A                                  | TWOPM-630C |
|----------------------------|---------------------------------------------|------------|
| Wavelength range (nm)      | 800~1600                                    |            |
|                            | InGaAs                                      |            |
| Measurement range (dBm)    | -70~+6                                      | -50~+26    |
| Uncertainty                | ±5%                                         |            |
| Calibrated Wavelength (nm) | 850、980、1310、1490、1550 (can be specified)   |            |
|                            | 0.1% & 0.01dBm                              |            |
| Operating temperature (°C) | -10~+60                                     |            |
| Storage temperature (°C)   | -25~+70                                     |            |
| Auto-off time (min)        | 10                                          |            |
|                            | 148×74×28                                   |            |
| Power Supply               | Rechargeable battery + Power Supply Adaptor |            |
| Weight (g)                 | 225                                         |            |

# TWOPM-620 Optical Power Meter



## Introduction

LT-620 handheld optical power meter is one of Light Travel 's newly developed multi-functional power meter designed for the installation, construction and maintenance of optical fiber network. It features compact size, smooth appearance, user friendly design, optional backlight, auto-off function, wide measurement range, accurate test, and universal connector.

## Features

Large LCD display, multi functions

Super Battery Working Hours

Self-calibrating functions

2.5mm universal Adapter

Quick react

Auto switch off function (optional)

## Specifications

| Type                      | TWOPM-620A                                | TWOPM-620C |
|---------------------------|-------------------------------------------|------------|
|                           | 800~1600                                  |            |
| Detector                  | InGaAs                                    |            |
| Measurement range (dBm)   | -70~+6                                    | -50~+26    |
| Uncertainty               | ±5%                                       |            |
|                           | 850、980、1310、1490、1550 (can be specified) |            |
| Display Resolution        | 0.1% & 0.01dBm                            |            |
|                           | -10~+60                                   |            |
| Storage temperature (℃)   | -25~+70                                   |            |
| Auto-off time (min)       | 10                                        |            |
| Battery working hours (h) | 240                                       |            |
|                           | 148×74×28                                 |            |
| Power Supply              | Alkaline battery ( 3 AAA 1.5V battery )   |            |
|                           | 225                                       |            |

## TWOPM-610 Mini Power Meter



### Introduction

TWOPM-610 mini power meter is Light Travel's latest self-developed test instrument, which adopting advanced unique chip, with features of ingenious appearance, high performance, and compact size. It has been widely used in telecommunication engineering and maintenance, teaching, scientific research and factories. It is an ideal test instrument for optical fiber solution.

### Features

Large LCD display, multi functions

Super Battery Working Hours

Self-calibrating functions

2.5mm universal Adapter

Quick react

Auto switch off function (optional)

### Specifications

| Type                       | TWOPM-610A                              | TWOPM-610B | TWOPM-610C | TWOPM-610D |
|----------------------------|-----------------------------------------|------------|------------|------------|
| Wavelength (nm)            | 800~1600                                |            |            |            |
| Detector                   | InGaAs                                  |            |            |            |
| Measurement Range (dBm)    | -60~+3                                  | -50~+10    | -40~+20    | -30~+30    |
| Uncertainty                | ±5%                                     |            |            |            |
| Power measurement          | 0.01dBm                                 |            |            |            |
| Operating Temperature (℃)  | -10~+60                                 |            |            |            |
| Storage Temperature (℃)    | -25~+70                                 |            |            |            |
| Auto-off Time (min)        | 10                                      |            |            |            |
| Battery Operating Time (h) | 50                                      |            |            |            |
| Power Supply               | Alkaline battery ( 3 AAA 1.5V battery ) |            |            |            |
| Weight (g)                 | 75 (battery excluded)                   |            |            |            |
| Dimension (mm)             | 118×60×20                               |            |            |            |

## LT-530i Intelligent Optical Multi-Meter



### Introduction

TWOPM-530i Optical Multi-Meter integrates functions of both TWOPM-640i Intelligent Optical Power Meter and TWOPM-440i Optical Stable Light Source module. It is easy to operate, and frequency of optical laser source can be optional. Perfect combination to make your fiber measurements more convenient.

### Features

Large LCD display, smooth appearance

To switch the function of power meter and light source by menu operation

Battery low voltage detecting and displaying

Different light source and optical power meter can be built into TWOPM-530i,

Set Ref function can be optional

### Specification

|                                                 | Parameter                       | Standard            |
|-------------------------------------------------|---------------------------------|---------------------|
| Optical Power                                   | Wavelength Range(nm)            | 800~1700            |
| Meter module                                    | Measurement Range (dBm)         | -70~+10 or -50~+30  |
|                                                 | Power relative Measurement(dBm) | 0.01                |
|                                                 | Uncertainty(dB)                 | ±5%                 |
|                                                 | Identified Frequency Range      | 10Hz~60KHz          |
| Optical Laser Source module                     | Emitter                         | F-P LD              |
|                                                 | Operating Wavelength (nm)       | 1310/1550(optional) |
|                                                 | Output Power (dBm)              | -7                  |
|                                                 | Output Frequencies              | 270Hz, 1KHz, 2KHz   |
| Generation specification of optical multi meter | Type                            | LT-530i             |
|                                                 | Power Supply                    | 4 AA charge         |
|                                                 | Auto-off time                   | 10mins(optional)    |
|                                                 | Communication Port              | USB                 |
|                                                 | Operating Temperature (℃)       | -10~+60             |
|                                                 | Dimension(mm)                   | 180*80*48           |

# TWOPM510 Optical Multi Meter



## Introduction

TWOPM510 Optical Multi-meter integrates functions of both intelligent optical power meter module and high stable light source module which can implement loop-around test by using both modules, and also can work individually by function switch operation in the menu. Perfect combination to make your fiber works more convenient.

## Features

Large LCD display, smooth appearance

To switch the function of power meter and light source by menu operation

Battery low voltage detecting and displaying

Set Ref function can be optional

## Specifications

|                                              | Parameter                    | Specification                                                        |
|----------------------------------------------|------------------------------|----------------------------------------------------------------------|
| Optical power meter module                   | Calibrated Wavelength(nm)    | 850,980,131,014,901,000                                              |
|                                              | Measurement range (dBm)      | A, C (2 range)                                                       |
|                                              | Power relative measurement   | 0.01(dBm)                                                            |
|                                              | Uncertainty (dB)             | ±5%                                                                  |
| Optical laser source module                  | Emitter Type                 | F-P LD                                                               |
|                                              | Wavelength (nm)              | 1310/1550(optional)                                                  |
|                                              | Output power (dBm)           | -7                                                                   |
| General specification of Optical multi meter | Power Supply                 | Alkaline battery ( 3 AAA 1.5V battery )                              |
|                                              | Auto-off time                | 10mins                                                               |
|                                              | Operating hours              | 28hrs ( only power meter work )<br>≥4 hrs ( Both work at same time ) |
|                                              | Operating temperature ( °C ) | -10~+60                                                              |
|                                              | Dimension (mm)               | 148×74×28                                                            |
|                                              | Weight (g)                   | 245                                                                  |

## LTVFL-410A Visual Fault Locator



### Introduction

Being an essential and excellent tool for the installation, construction and maintenance for the optical fibre networks, LTVFL-410A can test the breaks, bends, cracking and some other faults in fibres. It is widely used in communication, telecommunication, scientific research, construction and so on.

### Features

Compact size and light weight, suitable for field testing

End-to-end visual fiber identification with high power

2.5mm universal adapter

Locates fault up to 10km in fiber

Can easily detects breaks, micro-bends

### Specifications:

| Type                      | LTVFL-410A              |
|---------------------------|-------------------------|
| Output Power              | 1mW                     |
| Wavelength                | 650                     |
| Spectral Width (20℃)      | <5nm                    |
| Fiber Model               | SM、MM                   |
| Emission                  | CW、2HZ                  |
| Optical Connector         | 2.5mm universal adapter |
| Battery Operating Time    | 30hours                 |
| Power supply              | 2 AA batteries          |
| Operating Temperature (℃) | -10~+60                 |
| Storage Temperature (℃)   | -25~+70                 |

# LTVFL-410B Pen-type Visual Fault Locator



## Introduction

With a 650nm visible fiber diode, Pen-type Visual Fiber Locator LTVFL-410B can be operated in either continuous-wave (CW) mode or pulse mode. Being an essential and excellent tool for the installation, construction and maintenance for the optical fibre networks, LTVFL-410B can test the breaks, bends, cracking and some other faults in fibres. It is widely used in communication, telecommunication, scientific research, construction and so on. YWH-410B also features rugged metal case and portable size, which can be easy to take and use.

## Features

- Compact size and light weight, suitable for field testing
- End-to-end visual fiber identification with high power
- 2.5mm universal adapter
- Locates fault up to 10km in fiber
- Can easily detects breaks, micro-bends

## Specification

| Type                               | LTVFL-410B                |
|------------------------------------|---------------------------|
| Output Power                       | 2mW                       |
| Wavelength                         | 650                       |
| Fiber Identified Distance          | >8km (visible)            |
| Fiber Model                        | SM、MM                     |
| Connector                          | 2.5mm universal adapter   |
| Battery Operating Time             | 20 hours (2 AA batteries) |
| Operating Temperature (°C)         | -10~+60                   |
| Storage Temperature (°C)           | -25~+80                   |
| Dimension (without connector) (mm) | Φ24×185                   |
| Unit Weight (g)                    | 228                       |

## TWOLS-440i Optical Stable light source



### Introduction

TWOLS-440i Handheld Optical Stable Light Source is Light Travel's newly developed test instrument, together with TWOPM-640i Optical Power Meter ,It can provide one to four output wavelengths to meet specific requirements including the 650nm red source,1310/1550nm wavelength for the single mode fiber and 850/1300nm wavelength for the multimode fiber. It acts as a perfect solution for the optical fiber solution.

### Features

- Large LCD display
- Easy operation with one key to change wavelength
- Battery low voltage detecting and displaying
- High stability of output power
- Output power mode CW or modulation mode can be optional
- Unique FC/SC/ST universal adapter

### Specification

| Type                      | TWOLS-440i                                    |
|---------------------------|-----------------------------------------------|
| Wavelength                | One to four wavelength can be optional        |
| Emitter Type              | FP-LD or other can be specified               |
| Output Power (dBm)        | 0dBm(650nm)/-7/-7dBm                          |
| Output Modulation         | CW / 2Hz (650) / 270Hz,1KHz,2KHz (1310, 1550) |
| Fiber Type                | Single mode or multimode                      |
| Output Connector          | FC/SC/ST                                      |
| Power Supply              | 4 AA battery, AC adapter9V                    |
| Operating Temperature (℃) | -10~+60                                       |
| Storage Temperature (℃)   | -25~+70                                       |
| Dimension (mm)            | 180*80*48                                     |
| Unit Weight (g)           | 360                                           |

## TWOLS-430 Optical Light Source



### Introduction

TWOLS-430 handheld optical light source is applied FP-LD as emitter. Adopted the outstanding technique of same type of products, it can provide 1 to 4 wavelength output according to the specific requirements including the 650nm red source, 1310/1550nm wavelength for the single mode fiber and 850/1300nm wavelength for the multimode fiber. Together with TWOLS-430 optical power meter, it acts as a perfect solution for the fiber optic network.

### Features

Large LCD display

Easy operation with one key to change wavelength

Battery low voltage detecting and displaying

### Specifications

| Type                       | TWOLS-430                                                       |
|----------------------------|-----------------------------------------------------------------|
| Wavelength (nm)            | More wavelength can be optional ,maximum can be four wavelength |
| Emitter Type               | FP-LD                                                           |
| Output Power (dBm)         | 0 ( at 650nm is 0 dBm ) /-7/-7                                  |
| Modulation Frequencies     | CW / 2Hz (650) / 270Hz,1KHz,2KHz (1310, 1550)                   |
| Fiber Type                 | SM , MM                                                         |
| Optical Connector          | FC (Universal adapter)                                          |
| Power supply               | Alkaline battery ( 3 AAA 1.5V battery )                         |
| Operating temperature (°C) | -10~+60                                                         |
| Storage temperature (°C)   | -25~+70                                                         |
| Battery working hours (h)  | 45                                                              |
| Dimension (mm)             | 148×74×28                                                       |
| Weight (g)                 | 225                                                             |

# TWOLS-420 Mini Light Source



## Introduction

TWOLS-420 mini light source is used FP-LD as emitter. It integrates the super small size and strong function in one unit. It has been widely used in telecommunication engineering and maintenance, teaching, scientific research and factories. It is an ideal test instrument for optical fiber solution.

## Features

Large LCD display

Easy operation with one key to change wavelength

Battery low voltage detecting and displaying

## Specifications

|                            |                                         |
|----------------------------|-----------------------------------------|
| Emitter type               | FP LD                                   |
| Wavelength (nm)            | 1310 or 1550                            |
| Output Power (dBm)         | -7~-6                                   |
| Output stability (dB/20°C) | ±0.05dB/15min ; ±0.10dB/8h              |
| Output Type                | CW                                      |
| Optical connector          | FC/PC                                   |
| Power supply               | Alkaline battery ( 3 AAA 1.5V battery ) |
| Operating temperature (°C) | -10~+60                                 |
| Storage temperature (°C)   | -25~+70                                 |
| Battery working hours (h)  | 40                                      |
| Dimension (mm)             | 118x60x20                               |
| Weight (g)                 | 75 (without battery)                    |